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# **USSR** Report

ECONOMIC AFFAIRS

No. 1021

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# Contents

PLANNI	NG AND PLAN IMPLEMENTATION	
	Intersectorial Material Balances Reviewed (Various sources, various dates)	1
	As a Planning Tool, by V. Vesbland Conference Held, by L. Gol'denberg	
	Gosplan Collegium Discusses Planning, Use of Production Capacities (PLANOVOYE KHOZYAYSTVO, Jun 82)	10
	Counterplans for 1983 Outlined in Letter, Explanation of USSR Gosplan, AUCCTU (EKONOMICHESKAYA GAZETA, Jul 82)	16
REGION	AL DEVELOPMENT	
	Belorussian Gossnab Chairman on Benefits of Economy, New Techniques (Ye. Negerish; PROMYSHLENNOST' BELORUSSII, Mar 82)	21
	Intensification of Public Production and Dynamics of Yield on Capital (B. O. Yegiazaryan, K. G. Akopyan; PROMYSHLENNOST'	
	ARMENII, Apr 82)	27
	Altay Conference on Intensification of Production, Improved Administration	
•	(N. Manuilov; EKONOMICHESKAYA GAZETA, Jun 82)	33
	Ukrainian Gosplan Chairman on Role of Complex Programs in Raising Efficiency	
	(V. Masol; PRAVDA, 7 Jul 82)	38

### PLANNING AND PLAN IMPLEMENTATION

#### INTERSECTORIAL MATERIAL BALANCES REVIEWED

## As a Planning Tool

Moscow MATERIAL'NO-TEKHNICHESKOYE SNABZHENIYE in Russian No 3, Mar 82 p 24-27

[Article by V. Vesbland, chief of a sector of the Scientific Research Institute of Economics and the Organization of Material and Technical Supply: "The Intersectorial Balance Is an Important Tool of Planning"]

[Text] The system of planning and fulfillment material balances of the means of production, which ensure the comparison of the material resources and the needs, are the main tool of the planning of material and technical supply. It is difficult to overestimate the importance of material balances, since the physical and material proportions in the specific processes of the formation and distribution of the resources of production engineering products are established on their basis.

For the purpose of increasing the level of balance of the assignments of the state plans of USSR economic and social development and particularly the plans of material and technical supply, the following procedure of formulating the balances of material resources and the plans of their distribution is stipulated by the decree of the CPSU Central Committee and the USSR Council of Ministers on the improvement of the economic mechanism: when preparing the long-range plans of the economic and social development of sectors and enterprises USSR Gosplan, USSR Gossnab and USSR ministries and departments carry out the formulation of balances for the most important types of output with the specification of the main directions of their use. Balances for a consolidated products list and plans of their distribution among the main fund holders by years of the five-year plan are compiled when drafting the five-year plans. When elaborating the annual plans the balances and plans of distribution are drawn up according to the consolidated products list and a complete list of the fund holders.

USSR Gosplan draws up the balances and plans of distribution with respect to the most important types of industrial and agricultural output of intersectorial use, which determines the rate and proportions of the development of the national economy. USSR Gossnab draws them up with respect to the types of output of intersectorial use, which is not distributed by USSR Gosplan, as well as with respect to the output of the products list of USSR Gosplan, but with a breakdown of the line items; the ministries, departments and councils of ministers of the union republics

draw them up with respect to the list of products distributed by them for internal consumption and intersectorial use.

The existence of a complex system of material balances, which is differentiated according to types of plans and departments, requires the increase of the attention of planning organs to the problem of the intersectorial coordination of the material balances and the increase on this basis of the level of balance of material resources with the need for them. The material balance characterizes, as is known, the balance of resources and needs within the framework of one type of output or another. Here only the direct economic ties are taken into account; the indirect ties, which frequently are of great importance for the conditions of the formation and use of material and technical resources, do not find reflection in them. As a result, disturbances of the proportionality of the process of production and consumption and a shortage of individual types of output may occur.

For the solution of this problem the theory and practice of socialist planning have elaborated specific methods, among which there should first of all be named the elaboration of planning and report (statistical) intersectorial and interproduct balances. The system of intersectorial balances finds extensive use in the practical activity of USSR Gosplan and the USSR Central Statistical Administration on the analysis and planning of the proportions of the production and distribution of output in the national economy and is regarded as an advanced method of balance work.

In USSR Gosplan various modified versions of the intersectorial balance of the production and distribution of output in value and physical terms are being drawn up in conformity with the products list of the plan of production and the material balances. In particular, a consolidated intersectorial balance in value terms for 18 sectors is being drawn up by years with the subsequent generalization of the indicators by 5-year periods of the long-term future. A physical-value intersectorial balance with a breakdown by 25 industrial ministries, 30 sectors and 198 products is also being used. The method of the intersectorial balance is stipulated in the procedural instructions of USSR Gosplan, in the automated system of planning calculations (ASPR) there is the "intersectorial balance" subsystem.

Intersectorial report balances of the production and distribution of output in the national economy of the USSR and the union republics for "pure," "economic" sectors and with a breakdown by ministries are drawn up once every 5 years in the USSR Central Statistical Administration. Moreover, intersectorial report balances of the fixed capital and intersectorial report balances of the expenditures of labor are drawn up. Intersectorial report balances of the production and distribution of output in the USSR national economy for 18 "pure" sectors are drawn up annually.

The system of intersectorial report and planning balances plays an appreciable role in the analysis and planning of the national economy. By means of these balances the coefficients and standards of the materials-output ratio, the capital-output ratio, the capital intensiveness, the labor-output ratio and the stock-output ratio are determined with allowance made for the direct and indirect technological ties, the intersectorial coordination of the material flows for different types of output is accomplished, the proportions between the volumes of production of output in the sectors of the national economy and the most important

general economic indicators are established and so on. All this makes it possible to actively use the intersectorial balances for the increase of the level of balance of the plans on the basis of the coordination of the sectorial projections with specific needs, the closer linking of the indicators of the material balances with other indicators of the plans and the making of a number of other economic calculations.

The use of intersectorial balance methods in the analysis and planning of material and technical supply is limited at present to the elaboration in the system of USSR Gossnab of an interproduct planning balance for individual types of chemical, lumber, paper and packaging products. While regarding the indicated interproduct balance as an important element of planning work, which makes it possible by using computers to envisage the more efficient distribution of material resources and the elimination of the imbalance for individual types of output, it should be noted that this balance in the composition of the indicators and the amount of statistical and planning information is considerably inferior to the balance elaborations in the area of the analysis and planning of intersectorial ties, which exist, as was indicated above, in USSR Gosplan and the USSR Central Statistical Administration. While characterizing the technological ties with respect to specific types of output, the interproduct balance does not reflect all the diversity of the intersectorial ties in the national economy. The establishment of such ties in accordance with the data of this balance, in contrast to the intersectorial balances, is of a local nature and is carried out in isolation of the general economic indicators of the development of the national economy, which complicates the solution of the problem of the balance of the plans of material and technical supply with the plans of production and capital construction. For this reason the problem of increasing the level of intersectorial coordination of the material balances and stepping up the work on the economy and efficient use of material resources by means of the interproduct balance in its present form can be solved only in part even on the condition of the considerable enlargement of the list of products covered by the interproduct balance. The existence of an extensive and even more complicated system of economic ties requires the strengthening of the intersectorial aspect when solving the questions of the balance of the plans of material and technical supply.

The use, along with the system of material balances for individual types of output and interproduct material balances, of intersectorial balances as well should be considered one of the most important conditions of analytical planning work in material and technical supply. Since the quality of the plan to a considerable extent is determined by the available statistical base, in material and technical supply it would be necessary to proceed first of all to the drawing up of intersectorial report balances.

Such balances, as is known, make it possible to obtain a characterization of the processes of the formation of resources of output and their use in the sectors of the national economy. Their analytical potentials are characterized by the fact that they make it possible to study in a consolidated form and in a detailed sectorial breakdown the reproduction of output in the national economy and to determine the most important proportions—between the production of means of production and the production of consumer items, between consumption and accumulation, between the material production outlays and the net output and others. The analysis of the reproduction of output is augmented in the intersectorial report balances

by the indicators of the reproduction of fixed capital, stocks and manpower resources, on the basis of which it is possible to calculate synthetic sectorial indicators which characterize the dependence between the gross and net output, the basic working capital and manpower resources—the materials—output ratio, the capital—output ratio, the stock—output ratio and the labor—output ratio, the output—capital ratio of the fixed capital with respect to the new output. The USSR Central Statistical Administration makes the calculations of such indicators when elaborating the analysis of the results of the comparison of the intersectorial balances.

During the drafting of the plans of material and technical supply and their coordination with the plans of production and capital construction, as well as during the preparation of the conclusions of USSR Gossnab on the drafts of the plans of economic and social development a number of problems arise, which, in our opinion, could be solved with the enlistment of the indicated intersectorial balances. There belong here, for example, the improvement of the intersectorial coordination of the material balances, the check of the calculations of the expenditures of raw materials, materials and fuel by types of output and of the calculations of the need of sectors for material resources, the calculations of the production of output and the placement into operation of capacities, fixed capital and capital investments and the calculations of the basic parameters of the development of the material and technical base of the supply of the national economy. The materials-output ratio, the capital-output ratio, the stock-output ratio and a number of others with a breakdown by cooperating sectors of the national economy can be calculated in accordance with the data of the intersectorial balances for verifying the planning projections.

The methodological peculiarities of the intersectorial report balance, which facilitate its use in the economic analysis on material and technical supply, should be taken into account when performing this work. For example, the main version of the intersectorial report balance of the production and distribution of output is drawn up with respect to what are called "pure" sectors, in contrast to "economic" sectors, with respect to which planning is carried out and a statistical record is also kept.

Such a practice of recording the output is used in the intersectorial balance in connection with the fact that the "pure" sectors make it possible, first, to express the intersectorial ties with respect to the production and distribution of specific types of output and, second, to determine the technological coefficients of the materials intensiveness (the coefficients of the direct and total expenditures of materials on the production of output) with respect to the specific types of material expenditures and the output being produced. As is known, in conformity with the decree of the CPSU Central Committee and the USSR Council of Ministers "On Stepping Up the Work on the Economy and Efficient Use of Raw Material, Fuel, Energy and Other Material Resources" starting in 1983 the indicator "the limit (maximum level) of material expenditures in monetary terms per ruble of output (work)" will be approved in the five-year and annual economic plans. It is also envisaged to make this indicator a capital-forming indicator. It should be borne in mind that the above-indicated coefficients of material expenditures, which are calculated according to the data of the intersectorial balance, by their nature correspond to the indicator of material expenditures, which is being newly introduced.

An important feature of the intersectorial balance is the fact that its lines in essence reproduce the arrangement of the material balances of the corresponding types of output, while the columns characterize the consumption of output in production, while the distribution of the output is given in the intersectorial balance in a detailed sectorial breakdown. Such a balance, which is drawn up for an extensive group of sectors, specifies the most important national economic proportions and generalizes the material balances, bringing them together in a single balance. The intersectorial balance makes it possible to study thoroughly the interrelations between all the sectors of the national economy with respect to the production and consumption of output, to determine and analyze the social production and marketing costs and to evaluate the balance of the national economy.

It should be noted that the use of intersectorial report balances in USSR Gossnab in practice is hampered in connection with the fact that they are drawn up without consideration of the specific nature of analytical planning work in material and technical supply, and particularly the problems of the efficient use of resources. The point is that mainly consolidated national economic planning is the "client" of the intersectorial report balance. Therefore the classification of the sectors of such a balance does not make it possible to distinguish the products of the products list of USSR Gossnab. The main attention in this balance is devoted to value indicators to the detriment of the physical indicators, the data on the use of the output of machine building for offsetting the retirement and increasing the fixed capital are not differentiated by sectors, the indicators of the availability of stocks are inadequately elaborated, while the evaluation of the output is made with what is called the "double" counting of the trade, transportation and supply and marketing markup and the balance of the budget regulation of the differences in prices. The enumerated and other procedural peculiarities of the intersectorial balance do not create, in our opinion, insurmountable difficulties in the question of its use in the planning of material and technical supply. It seems expedient at the same time as the improvement in USSR Gossnab of the material and interproduct the stage-by-stage preliminary work on intersectorial balances to also develop studies.

At the first stage it is necessary to elaborate the method of the practical use in USSR Gossnab of the system of intersectorial report balances in its present form. At the second stage it is necessary to prepare suggestions on the improvement of the system of intersectorial report balances and on the elaboration in the USSR Central Statistical Administration of modified versions of the indicated balances, which conform more to the tasks of planning material and technical supply. At the third stage on the basis of the generalization of the experience of using intersectorial balances in USSR Gosplan and with the use of intersectorial report balances it is necessary to elaborate and adopt in the practice of the analytical planning work of USSR Gosplan a system of intersectorial planning balances, which is coordinated with the material and interproduct balances.

It is necessary on the basis of the strengthening of the coordination of the activity of USSR Gossnab and the USSR Central Statistical Administration on balance work to enlarge the products list of the intersectorial report balance by the differentiation of the aggregated groups of output with allowance made for the composition of the single-product and interproduct material balances, which are being elaborated in USSR Gossnab.

The material flows in the statistical intersectorial balance correspond. as is known, to the diagrams of reproduction, which are used in the methodology socialist planning, which makes it possible to identify the proportions of the use of output for various goals of intermediate and ultimate consumption. Here the intermediate consumption is differentiated in the intersectorial balance in accordance with the producing and consuming sectors, while the elements of the final product are differentiated according to the types of produced output in conformity with the products list of the sectors of the intersectorial balance and in accordance with the main sectors (directions) of its ultimate use. This means that the intersectorial ties in the indicated balance encompass only the consumption of output in production, which concerns its ultimate use, that here the sectors producing the output do not correspond to the consuming sectors. In characterizing the total amount of resources of output of each sector, the intersectorial balance, therefore, does not completely break down the sectorial material needs, which include not only the needs for the output being used for current production and operating needs, but also the needs which are connected with the need for the increase of the stocks and reserves, as well as the development of the production base of enterprises.

Meanwhile material and technical supply concerns in practice the total amount of output for production engineering purposes, which is used for meeting the indicated needs of production. In analytical planning work, therefore, it is important to identify the ties between sectors with respect to the production and use of output in the total amount of its consumption regardless of the place of each type of consumption in the physical and material structure of the gross national product. In this connection it is expedient to elaborate a modified version of the intersectorial report balance of the production and distribution of output, in which the breakdown of such elements of ultimate consumption as the accumulation of working capital, the offsetting of the retirement and the accumulation of fixed capital not only with respect to the producing sectors, but also with respect to the sectors, in which the process of accumulating and replacing the indicated capital occurs, would be envisaged. In other words, the matrices of the accumulation and replacement of capital should be distinguished in the composition of the final product. The combination of these matrices with the existing matrix of intermediate consumption would make it possible to estimate the total consumption of the given type of output in the corresponding sector and to draw up, in essence, an intersectorial balance of material and technical supply of the national economy. Thus, without changing the overall balance of resources and needs, which is used in the intersectorial balance, it is possible to obtain for each consuming sector data on the total volume of consumption of the output for production and operating needs, the increase of stocks, as well as the offsetting of the retirement and the increase of fixed capital, which are differentiated with a breakdown by groups of similar output in conformity with the products list of the "pure" sectors of the intersectorial balance.

For the purposes of bringing the data of the balance closer to the practice of planning and accounting in the national economy the USSR Central Statistical Administration is elaborating, as was indicated above, modified versions of this balance with respect to "economic" sectors and ministries. However, the elaboration of such balances is being considerably delayed (1 year or more after the completion of the work on the main version of the intersectorial balance of the output). The drawing up of the intersectorial balances of fixed capital and the

expenditures of labor is also being similarly delayed. This is considerably decreasing their topicality in the economic analysis of material and technical supply. The submittal to USSR Gossnab simultaneously of the intersectorial balances of the production and consumption of output with respect to "pure" and "economic" sectors and ministries and of the intersectorial balances of the fixed capital and the expenditures of labor would substantially enlarge the sphere of their use in economic analysis. In this connection, in our opinion, the question of the simultaneous elaboration of these balances or the significant shortening of the gap in the time of their elaboration should be raised for the USSR Central Statistical Administration.

By having the indicated modified versions of the intersectorial report balance, it is possible to make a thorough multivariant analysis of the drafts of the longrange plans of material and technical supply from the point of view of the assurance of the required intersectorial coordination of the five-year plan, on the basis of the prospects of the development of individual sectors of the national economy and the task of the efficient use of material resources. It is important that such work could be performed on the basis of mathematical economic models with the use of computers. As work experience is gained and dynamic series of intersectorial ties with respect to the production and use of output for production engineering purposes are developed, a base will be created for the drawing up of intersectorial planning balances of material and technical supply. The experience of USSR Gosplan, in which calculations of the intersectorial balance have already been made for the Eighth, Ninth and 10th Five-Year Plans, can be used for this work. Experience in the elaboration and use of models of the intersectorial balance when studying the problems of the development of the economy for the longrange future also exists.

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## Conference Held

Moscow VESTNIK STATISTIKI in Russian No 5, May 82 pp 65-66

[Article by L. Gol'denberg (Moscow): "A Conference on the Intersectorial Balance"]

[Text] A conference of workers of the departments of the intersectorial balance (the balance of the national economy) of the Central Statistical Administrations of the union republics on questions of the organization of the simultaneous study of the expenditures on production in the sectors of the national economy and the drawing up of the intersectorial report balance for 1982 was held in Minsk in December 1981.

Chief of the Belorussian SSR Central Statistical Administration V. Nichiporovich opened the conference.

A. Volkov, chief of the Administration of the Balance of the National Economy of the USSR Central Statistical Administration, delivered the report "The Main Problems of Drawing Up the Intersectorial Report Balance for 1982." He noted that the 26th CPSU Congress had directed attention to the need for the assurance of a balance in the development of the national economy and the observance of the

sectorial, national economic and territorial proportions. In the solution of these problems the role of the intersectorial report balances, which are used in planning and analytical work, is increasing. The intersectorial balances drawn up by the USSR Central Statistical Administration in comparable prices with a breakdown by 18 sectors of the national economy and industry for a long period are of great procedural and applied importance for the improvement of retrospective analysis, the forecasting of the rates and proportions of the development of the economy and the preparation of drafts of the basic directions of the five-year plan and for the long-term future.

The work on the drawing up of the intersectorial balance in the union republics is constantly being expanded and improved.

The intersectorial balances make it possible to study thoroughly and in detail the process of expanded socialist reproduction and the balance of the national economy, to study the sectorial structure of production and to establish the intersectorial production ties, to determine the technical and economic changes in the national economy. An important role belongs to the intersectorial balances in the development of an efficient system of prices. Such balances, which are drawn up with respect to union republics and economic regions, provide abundant material on the system of territorial ties in the national economy of the country and the territorial specialization of production.

The intersectorial report balances afford extensive opportunities for the use of modern mathematical economic methods of research with the use of computers in the analysis of social production and the planning of the national economy.

At present the practice of elaborating a system of intersectorial report balances, which includes balances of the production and distribution of output and fixed capital, by sectors and ministries, has formed in state statistics.

In recent years the organs of the USSR Central Statistical Administration have drawn up annually intersectorial report balances in accordance with a short program. For the USSR national economy as a whole these balances have been drawn up since the report for 1975, while for the majority of union republics they have been drawn up since the report for 1978-1979. Further the speaker analyzed thoroughly the basic results of the drawing up of intersectorial report balances in recent years, having devoted special attention to such important problems as the decrease of the metal content, power-output ratio, fuel-output ratio and others.

In speaking about the program of the drawing up of the intersectorial report balance for 1982, A. Volkov noted that it differs negligibly from the program of the preceding balance, and set forth the peculiarities of its elaboration, which are connected, in particular, with the introduction of new wholesale prices on 1 January 1982. It is proposed to carry out the elaboration of this balance in two prices—the new prices and the prices of the preceding year. In the report it was also shown how the reevaluation of the intersectorial balance for 1966 had affected the main national economic proportions and the sectorial structure of the national product and the national income.

L. Gol'denberg, chief of the Department of the Intersectorial Balance of the Administration of the Balance of the National Economy of the USSR Central Statistical

Administration, told about the organization of the collection of information for the drawing up of the intersectorial report balance for 1982 and about the procedure of conducting a simultaneous study of industrial enterprises, contracting construction organizations, kolkhozes and sovkhozes, transportation enterprises, enterprises of other sectors of the sphere of physical production, organizations and institutions of the nonproduction sphere in accordance with the results of their work for 1982.

A. Urinson, chief of the Department of the Preparation and Publication of Statistical Information for the Balance of the National Economy of the Main Computer Center of the USSR Central Statistical Administration, in his speech covered the problems of the organization of the electronic processing of the indicators of the intersectorial report balance for a large number of sectors.

The chiefs of the departments of the intersectorial balance (the balance of the national economy) of the Central Statistical Administrations of the union republics: Yu. Krivov (RSFSR Central Statistical Administration), K. Kostina (Belorussian SSR Central Statistical Administration), Ya. Kalnin' (Latvian SSR Central Statistical Administration), R. Fil'chenko (Kirghiz SSR Central Statistical Administration) and N. Shimanskaya, deputy chief of the Department of the Intersectorial Balance (Belorussian SSR Central Statistical Administration), also spoke at the conference. They discussed one of the complicated problems, which arises when drawing up the intersectorial report balances for the union republics -- the determination of the indicators of the imports and exports of products. Specific methodological and practical difficulties, which are connected with the organization of the obtaining of the corresponding information, the evaluation of the physical indicators of the imports and exports of products, the consideration in the price of the "delivered at the border of the republic" transportation costs, the breakdown of the turnover tax over the territory of the republics and so on, exist here. At present, unfortunately, the centralized elaboration of the indicators of the imports and exports of products is not being carried out. In this connection the Central Statistical Administrations of the union republics have been forced to collect the corresponding data from all trade, supply and procurement and other organizations, which import and export products, and, in individual instances, directly from the enterprises.

The speakers also gave information on the progress of the work on the intersectorial balance in the Central Statistical Administrations of the union republics, including the drawing up of intersectorial annual report balances in accordance with the short program. They pointed out the difficulties in the work, which, in particular, are connected with the temporary financing of the work on the intersectorial balance and the lack of permanent staff subdivisions in the Central Statistical Administrations of the union republics for the performance of work on the intersectorial balance.

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GOSPLAN COLLEGIUM DISCUSSES PLANNING, USE OF PRODUCTION CAPACITIES

Moscow PLANOVOYE KHOZYAYSTVO in Russian No 6, Jun 82 pp 125-128

[Article: "In USSR Gosplan"]

[Text] The question "On the Improvement of Planning and the Use of Production Capacities in the Sectors of Industry and the National Economy" was recently examined at a meeting of the Collegium of USSR Gosplan. During 1980-1981 the journal PLANO-VOYE KHOZYAYSTVO published a number of articles devoted to this problem. The information being published sets forth the content of the discussion of this question at the meeting of the collegium.

G. T. Pavlov, deputy chief of the Consolidated Department for Balances of Production Capacities and the Monitoring of Their Use of USSR Gosplan, delivered the report. Members of the Collegium of USSR Gosplan, Deputy Chief of the USSR Central Statistical Administration I. A. Pogosov and executives of departments of USSR Gosplan took part in the discussion. Chairman of USSR Gosplan N. K. Baybakov summarized the discussion.

In the report and statements it was noted that a high level of utilization of the production capacities, which for the majority of works during the past period came to more than 90 percent, is characteristic of the Soviet economy.

At the same time, as the analysis of the annual report balances of the production capacities showed, during the years of the 10th Five-Year Plan the tendency for the level of the utilization of production capacities for the production of the most important types of industrial output to decrease began to appear more and more persistently. In a number of sectors of industry the growth rate of the production of output lags behind the rate of increase of the production capacities.

There should be grouped with the main causes of the underutilization of production capacities the existence of intersectorial and intrasectorial production disproportions, which have increased in recent years, owing to which the public cooperation of labor is being upset and a shortage of raw materials, material and other resources is arising.

The existence of partial intrasectorial and intersectorial disproportions also has the result that a shortage of capacities in one link is responsible for the

decrease of the level of their utilization in other links. The lag of the development of the raw material base is responsible for the appearance in the processing sectors of "surplus" capacities, which for the above-indicated reason are not fully loaded.

Lack of coordination and disproportions also arise in connection with the inadequate soundness and nonfulfillment of the plans of the placement of capacities into operation due to the construction of new enterprises, the expansion of operating ones and the assimilation of new capacities.

The possibilities of the more consistent use of production capacities are also being checked by the existence of a number of major shortcomings at associations and enterprises with respect to the loading of equipment, the use of advanced technological processes and the improvement of the organization of production, labor and management.

The shift coefficient of metalworking equipment in basic production has decreased as compared with the level of preceding years at the enterprises of 11 machine building ministries. Whereas in 1975 the shift coefficient for the Ministry of Power Machine Building was 1.47, in 1980 it was 1.43, for the Ministry of Heavy and Transport Machine Building—respectively 1.39 and 1.37, for the Ministry of the Automotive Industry—1.59 and 1.54, the Ministry of Tractor and Agricultural Machine Building—1.59 and 1.57, the Ministry of Construction, Road and Municipal Machine Building—1.40 and 1.35.

It should be noted that given the low shift coefficient of metalworking equipment and its loading in machine building the level of utilization of production capacities, according to the reporting data, is comparatively high.

Such a gap between the production capacity and the loading of equipment is due to the fact that when calculating the production capacity of machine building enterprises a significant proportion of the installed equipment is not taken into account, by which the magnitude of the capacity is artificially understated and the coefficient of its utilization is overstated.

The incomplete manning of the leading shops with a regular labor force, including machine operators, assemblers, fitters, welders and others, is one of the main causes of the idle times of equipment.

At the same time as a result of the low level of mechanization of auxiliary operations a significant number of workers are employed in ancillary production under the existing shortage of workers of the machine tool occupations.

In a number of instances a reduction of the magnitude of the production capacities is being permitted are a result of the change of the products list and product assortment, which at times absorbs a significant proportion of the increase of the capacity, including by the placement of new enterprises into operation and the expansion and renovation of operating enterprises. Here the decrease of the production capacities is often explained by the increase of the labor-output ratio, while it is well known that with the development of scientific and technical progress the expenditures of labor per unit of output, as a rule, should decrease, although in some instances a decrease of the capacities may occur due to structural changes in the production of output.

The existence of shortcomings in the use of production capacities in industry to a considerable extent is a result of the fact that the compiling of the annual report balances and the calculations of the use of production capacities did not occupy the proper place when drafting the plans of USSR economic and social development.

To execute the decisions of the 26th CPSU Congress and Decree No 695 of the CPSU Central Committee and the USSR Council of Ministers of 12 July 1979 measures are being implemented on the improvement of the planning of the national economy.

Thus, for the purpose of increasing the role of the five-year plan as the main form of the planning of the economic and social development of the country and the basis of the organization of economic operations, within the State Five-Year Plan of USSR Economic and Social Development among the other balances the balances of production capacities have been elaborated for each year of the five-year plan.

The increase of the level of utilization of the capacities for the production of the majority of types of output is envisaged by the five-year plan. This reflects the practical realization in the plan of the tasks on the intensification of production.

The analysis of the results of the work of industry during the first year of the 11th Five-Year Plan shows that the level of the utilization of the production capacities for the production of a number of the most important types of output increased slightly as compared with 1980.

Thus, the level of utilization of the production capacities for the mining of coal and the production of nitrogen and phosphate mineral fertilizers, sulfuric acid, synthetic ammonia, machine tools, lumber, paper, cement, knitwear and whole milk products increased.

At the same time the level of utilization of the production capacities for the production of some types of output is less than is stipulated in the planning calculations of the utilization of production capacities. This attests that the created production potential is still not being used efficiently enough by ministries and departments. The influence of the shortcomings and negative phenomena, which occurred during the 10th Five-Year Plan, shows. To a certain extent this is also connected with the shortcomings existing in planning, especially in balance and synoptic economic work, which did not make it possible to properly anticipate the occurrence of bottlenecks and discrepancies in the development of the capacities of individual sectors and works.

The further development of the work on the improvement of planning and the utilization of production capacities in the sectors of industry and the national economy is directly connected with and is governed by the general direction of the improvement of the planning of the national economy, which is based on the realization of the most important theoretical aims of the party and the accomplishment of the tasks set by the 26th CPSU Congress and the November (1981) CPSU Central Committee Plenum.

A special place when elaborating the system of balances of production capacities should be assigned to the search for reserves for increasing the production

capacities without capital construction, which is possible by means of the more complete utilization of machines and equipment, the intensification, mechanization and automation of production processes and others.

The Collegium of USSR Gosplan adopted a pertinent decision on the discussed question, in which it directed the attention of the departments of USSR Gosplan to cases of the inadequate utilization of production capacities in individual sectors of industry, as well as to the tendency for their load to decrease.

For the purpose of the more complete utilization of the created production potential the departments of USSR Gosplan were commissioned to draw up suggestions on the improvement of the utilization of operating production capacities and the acceleration of the assimilation of the capacities being newly put into operation and to submit them together with the preliminary calculations of the utilization of production capacities for the draft of the plan for 1983.

The Consolidated Department for Balances of Production Capacities should:

prepare jointly with the sectorial departments and the Norms and Quotas Department a schedule of the check of the utilization of the production capacities of individual enterprises for the production of the most important types of output with a trip to the sites of specialists of the departments of USSR Gosplan and scientific research and planning institutes;

check jointly with the sectorial departments the organization of the work with the balances of production capacities in USSR ministries and departments.

The collegium accepted the suggestion of the Agriculture Department on the drawing up, starting with the plan for 1983, of planning balances and calculations of the utilization of production capacities for hothouse combines, poultry-raising and livestock complexes.

The appropriate departments of USSR Gosplan were commissioned to examine the question of introducing in planning practice standards of the utilization of production capacities and to make the necessary refinements in the prevailing main statutes on the calculation of production capacities with allowance made for the features of their planning in the raw material and several other sectors of the national economy and in the instructions on the compilation of annual report balances of the production capacities of industrial and agricultural production associations (combines).

The question "On the Improvement of the Coordination of the Activity of the Gosplans of the Union Republics on the Preparation of the Drafts of Plans and Their More Extensive Enlistment in the Elaboration of National Economic Problems" was examined in the Collegium of USSR Gosplan. In accordance with the results of the discussion and for the purpose of the more active enlistment of the Gosplans of the union republics in the drawing up of drafts of the plans of economic and social development and the elaboration of major national economic problems an order of USSR Gosplan on the indicated question was issued.

It is stipulated by the order that at the meetings of USSR Gosplan and the Collegium of USSR Gosplan the key problems of the economic and social development of the country, individual union republics and economic regions of the USSR, the elaboration and implementation of comprehensive goal programs should be discussed with the participation of the chairmen of the Gosplans of the union republics; reports of the chairmen of the Gosplans of the union republics on the comprehensive development of the economy and the intensification of the efficient specialization of the republics in the all-union division of labor should be heard regularly.

The departments of USSR Gosplan are ordered:

to tighten up the monitoring of the complete and timely reporting by USSR ministries and departments to the councils of ministers of the union republics of the control figures and the basic indicators of the drafts and approved plans for the production associations, enterprises and organizations of union subordination, which are located on the territory of the corresponding union republics;

to review the drafts of the plans and the suggestions on the development of enterprises of union subordination, which are submitted by the union republics, with the mandatory participation of the representatives of the Gosplans of the union republics and on the entire group of indicators, which are connected with the development of sectors, including the indicators of economic efficiency, the supply of manpower, the development of the nonproduction sphere and environmental protection;

not to accept from USSR ministries and departments suggestions on the construction of new enterprises and facilities or the expansion of operating ones without their preliminary examination in the area of location with the councils of ministers of the appropriate union republics;

to examine the projects of the development and location of sectors of the national economy and industry with the participation of representatives of the Gosplans of the union republics;

to make changes in the drafts of plans, which are adopted with the participation of the Gosplans of the union republics, only with the approval of the Gosplans of the corresponding union republics and the Territorial Planning Department of USSR Gosplan;

to use extensively in practice trips of specialists to the republics in order to provide procedural assistance to their Gosplans in the work on drawing up the drafts of plans and in order to monitor the progress of the fulfillment of the assignments of the state plans of USSR economic and social development;

to carry out the preparation of procedural instructions on the drafting of state plans of USSR economic and social development and other materials of a procedural nature, as well as indicators and forms for the compiling of plans with the participation of the Gosplans of the union republics.

The Terrotorial Planning Department of USSR Gosplan is commissioned:

to improve the work on the organizational methods supervision of the Gosplans of the union republics, to hold regularly instructional and organizational methods conferences with the representatives of the Gosplans; to review the basic indicators of the economic and social development of the union republics, which are submitted by them, with the participation of executives of the Gosplans of these republics and the appropriate departments of USSR Gosplan.

The Gosplans of the union republics are ordered:

to ensure the more detailed analysis of the drafts of the plans of the economic and social development of the republics and the suggestions on the drafts of the plans of associations, enterprises and organizations of union subordination, on the formation and development of territorial production complexes, on the elimination of inefficient shipments and on the elaboration of regional comprehensive goal programs;

to increase the level of balance of the drafts of the plans and the basic indicators of the comprehensive economic and social development of the union republics, especially in the area of fuel and energy, raw material, water, manpower and financial resources and the resources of local construction materials;

to tighten up the monitoring of the progress of the fulfillment of the plans of the economic and social development of the republics, to organize thorough checks at enterprises and organizations, to analyze more thoroughly the progress of the fulfillment of the most important assignments, to prepare suggestions on the elimination of the identified shortcomings and to submit them in good time to USSR Gosplan;

to participate actively in the preparation of prelanning materials, particularly the projects of the development and distribution of the productive forces of the republics;

to tighten up the monitoring of the efficient use of material, manpower and financial resources, to increase considerably the level of methodological supervision of the elaboration, organization and adoption of a system of advanced technical and economic norms and standards;

to expedite the development and introduction in planning of republic subsystems of the Automated System of Planning Calculations, with allowance made for the requirements of their interface with the Automated System of Planning Calculations of USSR Gosplan.

For the improvement of the skills of the staffs of the Gosplans of the union republics it is envisaged to broaden their training in the higher economic courses attached to USSR Gosplan and at the Institute of Management of the National Economy of the USSR Academy of the National Economy.

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COUNTERPLANS FOR 1983 OUTLINED IN LETTER, EXPLANATION OF USSR GOSPLAN, AUCCTU

Moscow EKONOMICHESKAYA GAZETA in Russian No 27, Jul 82 p 14

[Article: "On the Counterplans for 1983"]

[Text] On 11 June 1982 USSR Gosplan and the AUCCTU sent to USSR ministries and departments, the councils of ministers of the union republics, the central committees and the republic and oblast (kray) councils of trade unions the letter "On the Counterplans of Production Associations (Enterprises) and Organizations for 1983," the text of which is published below.

During the years of the Ninth and 10th Five-Year Plans considerable experience in drafting and implementing counterplans was gained in our country. From 25 to 50 percent of the production associations (enterprises) of a number of industrial ministries (the USSR Ministry of Instrument Making, Automation Equipment and Control Systems, the USSR Ministry of Machine Building for Animal Husbandry and Fodder Production, the USSR Ministry of Power Machine Building, the USSR Ministry of the Petroleum Refining and Petrochemical Industry) successfully used counterplanning for identifying the reserves of the growth of production and the increase of its efficiency

However, the possibilities incorporated in counterplanning for the identification of the reserves of the increase of production efficiency and the involvement of the broad masses in this work are still not being fully utilized. Moreover, since 1978 the number of production associations (enterprises) and organizations, which are adopting counterplans, has been steadily decreasing. Only 934 production associations (enterprises) adopted counterplans for 1982. Counterplans for 1982 were not adopted by a single production association (enterprise) of the USSR Ministry of the Petroleum Industry, the USSR Ministry of the Coal Industry, the USSR Ministry of Power and Electrification, the USSR Ministry of the Automotive Industry and a number of other ministries.

In conformity with Decree No 695 of the CPSU Central Committee and the USSR Council of Ministers of 12 July 1979 the drafting of the annual plans is carried out from below--from production associations (enterprises) and organizations on the basis of counterplans which exceed the assignments of the five-year plan, which have been set for the corresponding year. These plans are the basis of the formulation of the annual plans of the economic and social development of production associations (enterprises) and organizations.

USSR Gosplan and the AUCCTU recommend that the USSR ministries and departments, the councils of ministers of the union republics, the central committees and the republic and oblast (kray) councils of trade unions direct the attention of production associations (enterprises) and organizations to the adoption of counterplans for 1983, which exceed the assignments of the 11th Five-Year Plan for this year, first of all on the increase of labor productivity, the economy of raw materials, materials and fuel and energy resources, the decrease of the production cost, the increase of the profit, the production of output of the highest quality category and the increase of the production volumes, mainly by the economy of resources.

USSR Gosplan and the AUCCTU direct the attention of the USSR ministries and departments, the councils of ministers of the union republics, the central committees and the republic and oblast (kray) councils of trade unions to the need for the utmost support of the initiative of labor collectives on the drafting of counterplans, the accomplishment of the coordination of the counterplans with the drafts of the plans and with the socialist obligations of related enterprises and the taking of steps on the assurance of the coordination of the counterplans with material resources with allowance made for the assignments on their economy.

It is advisable to discuss the results of the examination and approval of the counterplans for 1983 at the joint meetings of the collegia of the USSR ministries and departments and the appropriate central committees of the trade unions.

The USSR ministries and departments and the councils of ministers of the union republics are to report to USSR Gosplan and the AUCCTU by 15 December 1982 the data on the approved counterplans for 1983. The form for the generalization of the data on the counterplans for 1983 will be furnished to the economic planning administrations of the USSR ministries and departments and to the Gosplans of the union republics during the fourth quarter of 1982.

A explanation of USSR Gosplan on some questions of the drafting of the counterplans for 1983 is attached to the letter.

The Explanation of USSR Gosplan

In response to the questions being received concerning the procedure of drafting the counterplans for 1983 the Department of the Improvement of Planning and Economic Stimulation of USSR Gosplan explains the following.

1. The counterplans for 1983 should be drafted in conformity with Decree No 695 of the CPSU Central Committee and the USSR Council of Ministers of 12 July 1979 "On Improving Planning and Strengthening the Influence of the Economic Mechanism on Increasing Production Efficiency and Work Quality" and Decree No 304 of the CPSU Central Committee, the USSR Council of Ministers, the AUCCTU and the Komsomol Central Committee of 26 March 1981 "On the All-Union Socialist Competition for the Successful Fulfillment and Exceeding of the Assignments of the 11th Five-Year Plan," as well as Statute No AB-II-D on the Procedure of the Drafting of Counterplans for the 11th Five-Year Plan and the Stimulation of Their Fulfillment, which was adopted by USSR Gosplan, the USSR State Committee for Labor and Social Problems, the USSR Ministry of Finance, the USSR Central Statistical Administration and the AUCCTU on 25 May 1981.

The plans, which were drafted by the labor collectives of production associations (enterprises) and organizations on the basis of the development of socialist competition and the use of internal economic reserves and were approved by economic organs superior in subordination and which exceed the assignments of the 11th Five-Year Plan, which were set for this year, are the counterplans for 1983.

The underlying basis for the drafting of the counterplans for 1983 is the assignments of the five-year plan for this year, which are established for production associations (enterprises) and organizations by superior economic organs to execute Decree No 990 of the USSR Council of Ministers of 8 October 1981 "On the State Plan of USSR Economic and Social Development for 1981-1985."

2. The data on the counterplans of production associations (enterprises) and organizations for 1983 are submitted in accordance with established procedure by USSR ministries and departments and the councils of ministers of the union republics on Form No 1-3 posp. In this form the assignments in accordance with the five-year plan and the calculations for it, on the basis of which the drafts of the counterplans on the commodity output in comparable prices, the output of the highest quality category, the increase of labor productivity and the profit from industrial activity are drawn up, are cited in the prices on 1 January 1982. The procedure and forms of the calculations for the making of corrections in the assignments of the five-year plan of USSR ministries and departments and the councils of ministers of the union republics in connection with the putting into effect on 1 January 1982 of new wholesale prices and rates are stipulated by Letter No NR-24/II-21 of USSR Gosplan of 17 February 1982.

The calculations of the draft of the plan on the economic stimulation funds in accordance with Form No 1-pfs are also made on the basis of these more accurate data on the assignments of the five-year plan for 1983.

In case of the making of individual changes by USSR Gosplan and the USSR Council of Ministers in the more accurate data on the assignments of the five-year plan for 1983 the appropriate corrections are made by USSR ministries and departments and the councils of ministers of the union republics in the calculations of the drafts of the plans on Forms No 1-3 posp and No 1-pfs.

3. The work on counterplanning is carried out in the following stages:

the preparation of the drafts of the counterplans of production associations (enterprises) and organizations and the submittal of these drafts to the superior economic organ;

the preparation of the drafts of the plans of the economic and social development of superior economic organizations, the ministries and departments of the USSR and the union republics, which include the drafts of the counterplans of production associations (enterprises) and organizations;

the making of refinements in the drafts of the counterplans of production associations (enterprises) and organizations in accordance with the results of the review of the drafts of the plans of the economic and social development of the ministries and departments of the USSR and the union republics in USSR Gosplan and the USSR Council of Ministers;

the approval and delivery of the counterplans of production associations (enterprises) and organizations on the date set by the USSR Council of Ministers for the delivery by USSR ministries and departments and the councils of ministers of the union republics of the plans and assignments to associations, enterprises and organizations.

4. When approving the counterplans of production associations (enterprises) and organizations the superior economic organs should:

along with the name of the specific indicator give an indication of the fact that the plan on it is a counterplan;

give the numerical value of the indicator, in accordance with which the counterplan was approved, by two lines: on the first line--the total value of the indicator, on the second line--the amount of the excess of the counterplan over the assignment of the five-year plan.

An example of the appearance of the annual plan with the distinction of the assignments of the counterplan is cited in the following table (the figures are arbitrary):

Indicators of the	Unit of	Unit of Annual		Including by quarters			
annual plan	measurement	plan	I	II	III	IV	
Volume of output	millions	•					
(counterplan)	of rubles	50.3	12.0	12.3	12.8	13.2	
including excess of					•		
counterplan over as-		-					
signment of five-	millions	•					
year plan*	of rubles	0.3	0.07	0.07	0.08	0.08	
Share of output of							
highest quality cate-			•				
gory in total produc-							
tion volume	percent	25	23	24	25	26	
Increase of labor	percent of cor-				•		
productivity (counter-	responding pe-						
plan)	riod of 1982	104	103	104	104	105	
including excess of							
counterplan over as-	percent of cor-					:	
signment of five-	responding pe-						
year plan*	riod of 1982	0.5	0.5	0.5	0.5	0.5	
Total wage	millions						
fund	of rubles	10.06	2.4	2.46	2.56	2.64	

The excess of the counterplan by quarters over the assignment of the five-year plan is established with an orientation toward the specific values of the quarterly plans in the plan for the year.

The need for such a design of the annual plan stems from the following circumstances:

- a) the counterplans might be approved not for all the indicators, but only for some of them. In this example, for the volume of output and the increase of labor productivity;
- b) the extent of the excess of the counterplan according to the specific indicator as compared with the 5-year assignment should be clearly established, since:

in proportion to this excess economic stimulation is carried out by the increase of the planned contributions to the incentive funds according to higher standards and the bonuses to workers are set in higher amounts;

in the case of the nonfulfillment of the counterplan, but the fulfillment of the five-year plan for the corresponding year a greater portion of the bonuses is paid to the workers in proportion to the fulfillment of the counterplan;

if the indicators of the counterplans are decreased during the year for individual production associations (enterprises) and organizations by a greater amount than the excess over the assignment of the five-year plan, which was singled out by a separate line, these associations (enterprises) and organizations are not grouped with those which have counterplans on this indicator.

7807

CSO: 1820/180

#### REGIONAL DEVELOPMENT

BELORUSSIAN GOSSNAB CHAIRMAN ON BENEFITS OF ECONOMY, NEW TECHNIQUES

Minsk PROMYSHLENNOST BELORUSSII in Russian No 3, Mar 82 pp 43-46

[Article by Ye. Negerish, chairman of Gossnab BSSR: "Norms, Requirements and Reserves"]

[Text] Our national economy uses a vast amount of raw and other materials, fuel and power resources; this requires further strengtheing of control over their utilization and the location of reserves of economy that are deep within. An important role in this matter is called upon to be played by organs of material-technical supply.

In recent years, the system of Gossnab BSSR, serving practically all the enterprises and organizations located on the territory of the republic, has significantly expanded and strengthened its own base. Much has been done relating to mechanization and automation of loading-unloading work and the introduction of the latest production processes at depots and warehouses. All this has undoubtedly contributed not only to fuller and more timely provision of users with material resources but also to their more rational use.

With each year, modern methods of supply organization are increased on a wider scale. First and foremost, direct long-term economic ties are being developed. This is one of the chief directions of improvement of material-technical supply of the national economy. Accumulated experience attests to the fact that direct long-term economic ties make it possible to create most favorable conditions at associations and enterprises for mutually coordinated planning of production and of its material-technical support as well as for raising production quality and improving the use of fixed and working capital and growth of labor productivity. At the same time, the establishment of such ties serves as an important means of economy of material, labor and financial resources inasmuch as production deliveries proceed in accordance with the assortment orders of clients on the basis of coordinated schedules, economical batches and in specialized packing and means of transport providing mechanization of loading and unloading work and so on. Here is a telling example. The transfer of Minsk's plants for gears and GPZ-11 to direct long-term economic ties with users of their products has made it possible for the Minsk workers to use reusable packing. As a result more than 150,000 rubles are saved in a year through economy of materials that previously went into its fabrication.

In 1980, republic customers received 40 percent of all metal products, 48 percent of pulp-and-paper products, more than 70 percent of metalworking tools and 60 percent of industrial rubber products through direct long-term economic ties. Nonetheless, today this form of supply essentially includes only production associations and enterprises with large-series and mass production. The time has come for others to be brought in to use direct ties.

Gossnab BSSR attaches major importance also to the development of guaranteed comprehensive supply of customers with products of production-technical use. In 1980, a total of 2,518 contracts was concluded for such service. On their basis, products of production-technical use were sold in the amount of 507,400,000 rubles, which is 2.4-fold more than in 1975. We shall further develop during the present five-year plan guaranteed comprehensive supplying of customers. The fact is that it ensures significant economy of material resources. Through centralization of stocks at enterprises of supply and sale organizations, stocks at enterprises of customers are reduced. Thus, for example, at enterprises of the republic's machine-tool industry, stocks of metal products were reduced 18.5 percent in comparison with the norm following their transfer to guaranteed comprehensive supply.

At supply and sale organizations, such forms are beginning to be increasingly more widely practiced as providing clients on a leased basis individual instruments, apparatus and equipment and also rendering them middleman services. This is a promising development in the work of material-technical supply organs. Today leasing centers for instruments and apparatus operate in Minsk, Gomel' and Mogilev. Their services are used by more than 500 organizations. The economic effect from instrument leasing amounts to more than 3 million rubles.

At a number of Gossnab depots and warehouses, shops for cutting paper and cable products are in operation, shops are being opened for bottling or packing of acids, alkali and chemicals in powder form, and construction of a shop has been started for cutting of metal products. Services of this kind provide a means of significantly reducing waste and raising the coefficient of use of products; they make it possible for customers to receive on order semifinished products corresponding to their specific needs.

Complex tasks are to be carried out in accordance with the decree of the CPSU Central Committee and the USSR Council of Ministers "On Intensifying Work on Economy and Rational Use of Raw-Material, Fuel-Power and Other Material Resources." During the years of the present five-year plan, for example, it will be necessary to save 160-170 million tons of conventional fuel and in machine building and metalworking to reduce the expenditure of rolled ferrous metals by no less than 18-20 percent. It is understood that these problems can be solved only when both suppliers and users work for a radical improvement in the use of raw materials, natural resources, materials, fuel and power at each enterprise and in each institution, in each part of the national economy; and this can be done only through the uniting of their efforts in this direction.

Many clients have accumulated positive experience in such work. Zealous proprietors increase surveillance over adherence to optimum production regimes; they draw into production secondary fuel and power resources and undertake

other effective measures. Thus, for example, at enterprises of the BSSR Ministry of Food Industry, a significant economy of fuel, heat and electric power has been achieved as the result of replacement of obsolete equipment and improvement of the coefficient of use of boilers, a higher percentage of condensate return and conversion of heating buildings from steam to hot water. The automation alone of lighting installations at enterprises of the ministry and use of economical sources of light produced an economy of more than 900,000 kilowatt-hours of electric power.

A significant economy of rolled ferrous metals was achieved at enterprises of the BSSR Ministry of Local Industry through improved designs of machines, improved technology and efficient cutting. Last year, enterprises of the BSSR Timber and Wood Processing Industry saved a large amount of timber through the use of thinner chipboard and also by using polyvinyl-chloride materials instead of timber as well as using on a broader scale secondary raw materials and work wastes in the fabrication of furniture and consumer items. The use of thinner chipboard alone made it possible to save about 1,000 cubic meters of sawtimber.

There are many examples of thrifty and efficient use of fuel-power and material resources. But there are also examples of another kind. A number of enterprises use up resources extremely inefficiently at above prescribed norms. Take Grodno Combine of Construction Materials. In the first half of last year, it overexpended 96,000 standard tons of boiler and furnace fuel. Enterprises of the BSSR Ministry of Construction Materials, such as the Petrikovskiy Keramzit Plant, the Oktyabr' Glass Plant and also the Glubokskiy and Rogachev milk canning combines, have used just as freely fuel and power resources without taking norms into consideration.

Such examples are easy to find among metal users. Take Polotsk Foundry and Machine Association, which for three years has not fulfilled its economy targets. The Minsk Production Association for Production of Automatic Lines and Udarnik Plant have done a poor job of economizing metal during the past year.

It should be noted that the coefficient of metal use has risen too slowly at some enterprises. Thus, at the Minsk Gear Plant, it now has stayed at 0.61 for many years and only 0.42-0.57 for some products (this coefficient is equal to 0.73 for the sector). Boosting it only two points would make it possible for the enterprise to save more than 500 tons of metal in the course of a year.

Large metal losses are allowed to occur because of production of defective products. At the same Minsk Gear Plant, quarterly losses of metal have reached 260 tons for this reason. Similar examples exist at Minsk's motor and refrigerator plants.

In recent years the question has been acutely raised concerning strict observance of fund discipline. At the same time there are enterprises and associations that do not take these requirements into account. They include the above-mentioned Polotsk Foundry and Machine Association as well as the Gomel' Starting-Engine Plantand the Borisov Emal'posuda Plant.

One of the most important factors in economical and purposeful use of raw and other materials is further refinement of the normative base. This is to involve both the enterprises and associations themselves and also planning and supply organs. In 1980 alone, refinements and validations of norms carried out by Gossnab BSSR resulted in the saving of 383 tons of refractory items, 200 tons of cardboard and a number of other acutely scarce materials.

Refinement of the normative base will make it possible not only to detect cases of excessive need of individual acutely scarce materials but also the possibility of replacing them with those that are not so scarce. Thus, for the production of ruberoid at the Osipovichi Cardboard-Ruberoid Plant, they started using in part dolomite flour in place of ground talc. Savings of talc amount to 4,000 tons in a year.

Attaching much importance to the validity of the normative base, the republic's Gossnab set up a special subdivision that just in the last years of the 10th Five-Year Plan rendered more precise about 6,000 norms of expenditure of raw and other materials. We shall conduct this work henceforward together with associations and enterprises.

A significant reserve for economy of raw and other materials is to be found in wide-scale use of secondary material resources formed in the sphere of production and consumption. In recent years, a certain amount of work has been done in the republic on the use of secondary material resources. During the 10th Five-Year Plan, for example, more than 170,000 tons of waste from rolling of ferrous metals were used without smelting; this permitted additional production of products valued at 50 million rubles. In this way, one ton of metal waste made possible fabrication of products valued at about 300 rubles, while one ton of waste going into an enterprise's scrap-metal pile pays only 25-28 rubles. Processing of wastes is well organized at the Minsk Tractor Plant imeni V.I. Lenin Production Association, which annually makes products from them valued at one and a half million rubles and also at the Atlant Production Association (produces products in the sum of 916,000 rubles). Mention should also be made of the work of the Mogilev Khimvolokno Production Association, which produces various products from wastes in the amount of 3.4 million rubles.

But one frequently runs into cases where enterprises that have a sufficient amount of waste produce consumer goods from full-value raw and other materials. This particularly may be said of Vitebsk Machine-Tool Building Plant imeni S.M. Kirov, where full-value metal is used for garden equipment, although the latter could be produced from thin-sheet steel wastes. Only 0.9 percent of sheet-steel waste is reused at the Minsk Electrical Equipment Plant. Checks conducted by Gossnab BSSR show that the heads of a number of enterprises still fail to appreciate the importance of using secondary material resources in the sphere of production. For example, enterprises of the BSSR Ministry of Light Industry turned over to procurement organizations 10,300 tons of wastes of the textile, knitwear and sewing industry, which amounts to a total of 15.8 percent of the volume of their formation. At the same time, more than 4,000 tons of the wastes of the light industry were destroyed. A great deal of timber wastes is being lost so far. In the republic they add up to 2.6 million cubic meters in the course of a year. Only half is used for production output.

It is intolerable that about 500,000 cubic meters of wastes of workable wood, veneer, pieces of board, slabs, laths and the like continue to be burned as before or are taken to dumps.

Last year Gossnab BSSR and the republic Gosplan started on a compilation of balances of formation and utilization of production wastes. This will help to distribute wastes in an economical manner especially in connection with those of them that are meant for the manufacture of consumer goods.

It should also be said that starting with last year a section "Utilization of Secondary Raw Materials" has been included in state plans of economic and social development. It provides indicators characterizing volumes of procurement, delivery and processing of secondary raw materials and limits of capital investment and construction-installation work in creation of capacities for processing of secondary raw materials. In this way, utilization of the resources of secondary raw materials has become for the first time a subject of centralized planning, which attests to not only its growing economic importance but also to the need of planned use of these resources in national economic turnover.

For the purpose of organizing work on rational utilization of industrial wastes, creating a unified accounting system, forming, distributing and utilizing metal wastes, Gossnab BSSR together with Gosplan BSSR and the BSSR Central Statistical Administration has worked out a statute that has been approved by the republic Council of Ministers "On the Conditions of Collection, Storage, Utilization and Sale of Industrial Wastes in Belorussian SSR." Statistical reporting has been introduced—a balance of formation and distribution of industrial wastes and accounting of their use. The employment of the indicated documents has made it possible to create in the republic a unified well-defined system of detection of wastes and to organize control over their formation and utilization.

Moreover, for the purpose of wide-scale dissemination of advanced experience in the use of production wastes, Gossnab BSSR has set up a permanent exhibit where samples of products and consumer goods made from secondary material resources are shown. Today there can be seen at this exhibit more than 1,000 samples of wastes and of items made from them. Approximately 200 enterprises of local and union subordination use workable wastes in their production output. The republic's local industry alone has processed over the five-year period 31,000 tons of metal wastes and produced products worth 12 million rubles.

The finding and realization of reserves of economy through the use of secondary raw materials on the scale of the republic constitute an important task of planning and economic organs. But inasmuch as the problem of procurement and use of secondary raw materials is of an intersectorial character, it must be solved for the republic's economy as a whole by uniting the efforts of all sectors into a single coordinated plan.

In conclusion, I want to speak about another large reserve in economy of resources and raw materials—use of above-norm and surplus material stocks in economic turnover. Gossnab BSSR is also involved in the solution of this

problem. Being in the immediate proximity of consumers, we possess the best possible conditions for including unused material resources in circulation.

With our help there were put into operational turnover in the years of the 10th Five-Year Plan material resources in an amount of about 580 million rubles by means of reduction of above-norm and surplus stocks; this includes a considerable quantity of rolled ferrous metals, steel pipe and cable products.

Nonetheless this reserve has been poorly used so far. Above-norm stocks of commodity stocks in the republic are vast and continue to grow.

The outlined economy program can and must be fulfilled. But I repeat--its realization requires an integrated approach and a union of efforts on the part of all sectors of the national economy. Gossnab BSSR in its turn will try to make a worthy contribution to its accomplishment. A special organizational subdivision is being created in our apparatus-an administration for economy and rational utilization of material resources. It will maintain the strictest of control over their expenditure, norm setting and locate internal reserves from reduction of material intensiveness. We shall also expand direct longterm economic ties and conduct work more energetically on eliminating parallel operating departmental supply organizations and concentrating their depots and warehouses in the Gossnab BSSR system, which will make it possible to improve maneuvering of material resources and reduce warehousing, transportation and administrative expenses by about 5 million rubles. Furthermore, we are counting on achieving significant savings through improvement of the supply system on the basis of employment of economic-mathematical methods. Today we are working on the problem of automation of accounting of the collective stocks of Belorussian SSR on the basis of information on remains and movement of material resources. In short, we shall not only concern ourselves with satisfying the needs of enterprises for raw and other materials but also with rendering these requirements more precisely and working for timely replacement of resources in short supply with those that are in less short supply.

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#### REGIONAL DEVELOPMENT

INTENSIFICATION OF PUBLIC PRODUCTION AND DYNAMICS OF YIELD ON CAPITAL

Yerevan PROMYSHLENNOST ARMENII in Russian No 4, Apr 82 pp 49-51

[Article by B.O. Yegiazaryan, doctor of economic sciences, and K.G. Akopyan, economist]

[Text] One of the indicators of efficiency of public production is the return on investment in fixed production capital. But in our view, although the dynamics of return on investment characterize the process of intensification of public production, it is impossible to judge on the basis of its analysis the presence or absence of a significant influence on the economic growth of intensive factors. This would require finding cases of growth of return on investment under conditions of both extensive and intensive economic development and quantitatively evaluating the degree of influence on it of corresponding factors taken individually. Both tasks can be solved with the aid of the apparatus of production functions.

Let us assume that purely extensive development occurs. (In practice, economic development takes place as a rule under the simultaneous influence of both extensive and intensive factors. We shall apply the described analysis to those cases of practical work where the influence of scientific-technical progress is insignificant and economic development can be considered as primarily extensive). The relation between output and costs in such a case can be expressed with a production function in which the volume of output (gross or net production) is dependent on the average yearly value of fixed production capital ( $C_t$ ) and the average yearly number of workers engaged in production ( $N_t$ ); the sum of particular elasticities of output for these two factore is equal to one. If both parts of the equation are divided by the volume of average yearly fixed production capita and simple transformations are carried out, it is then possible to obtain a formula for yield on capital in the following form:

where  $\Phi_{ot}$  is the yield on capital in year t; K is the coefficient of dimensionality;

 $\alpha$ -1, 1- $\alpha$  are particular elasticities of yield on capital for the corresponding factor.

Differentiating (1) on the basis of time and dividing the obtained result by it, we determine the relation between the average yearly rate of growth of return on investment  $(f_{ot})$ , on the one hand, and the average yearly rates of value of fixed capital  $(C_t)$  and the number of persons employed in production  $(n_t)$ , on the other:

$$f_{o_{t}} = (d-1) C_{t} + (1-d) n_{t}$$
 (2)

Growth of return on investment will take place when  $(1-\alpha)n_t>(1-\alpha)c_t$ . This means that with purely extensive development (with no change in the qualifications of workers and in the value of fixed production capital per unit of their capacity) growth of return on investment could occur only and only under the condition of the growth rate of the number of employees surpassing the growth rate of fixed production capital, that is, with the replacement of a part of embodied labor with live labor. In the case of equality of the growth rates of these two values or, in other words, with no change in the capital-labor ratio, yield on capital does not change and with growth of the capital-labor ratio, yield on capital diminishes.

Consequently, with purely extensive development, growth of return on investment cannot be considered as a positive occurrence as is shown by replacement of embodied by live labor and by an increase in the use of manual labor, which under conditions of limitation of labor resources cannot exert a positive influence on economic growth and contradicts the principles of the party's economic policy and the course of mechanization of labor-intensive processes.

Let us now assume that economic development is being influenced aside from extensive factors by scientific-technical progress as the totality of intensive growth factors.

Then the relation between output and costs may be expressed with the help of the production function, differing from the one used above by the fact that for computing the influence of scientific-technical progress a factor  $l\gamma^t$  is introduced where  $\gamma$  is the rate of scientific technical progress. In such a case the formula for return on investment will differ from equation (1) by the presence of the factor  $l\gamma^t$  in its right part.

Accordingly, the relation between the rate of growth of return on investment, on the one hand, and the value of available capital, the number of workers and scientific-technical progress, on the other, will look as follows:

$$f_{o_t} = (1-d) (n_t - c_t) + \gamma$$
 (3)

Since  $1-\alpha>0$  and  $\gamma>0$ , the change in yield on capital will depend on the correlation between the growth rates of basic factors of production—fixed capital and labor. (The value  $\gamma<0$  attests to the presence of the process of disintensification of development, which is not characteristic of the social—ist economy. From a practical point of view, the examination of this case presents no interest).

Let us assume that the capital-labor ratio drops  $(n_t > c_t)$ , that is, intensification possesses a labor expending (capital preserving) character. This could be the consequence of both reduction of value of fixed capital per unit of capacity and improvement of production organization leading to more intensive utilization of fixed capital (a rise in the shift system of equipment and the like). In this case, the growth rate of yield on capital is always bigger than zero and its growth is due to both the influence of scientific-technical progress and of the extensive factor—reduction of the capital-labor ratio.

If the capital-labor ratio remains unchanged  $(n_t=c_t)$ , that is, intensification is of a neutral character (in relation to replacement of one production factor by another, the growth rate of yield on capital will equal the rate of scientific-technical progress.

In the case of the capital-expending form of intensification, that is, with  $c_t$ , the influence of the totality of factors of the qualitative order does not always result in growth of yield on capital.

For brevity's sake, we introduce the expression  $(1-\alpha)$   $(c_t-n_t)=A$ .

If  $\gamma$ <A, yield on capital drops. Capital-expending development means that there takes place the replacement of a part of living labor with embodied labor, and the drop in yield on capital in this case attests to the fact that the quantitative change in the correlation between fixed capital and the number of employees in production is not accompanied by adequate growth of the total effectiveness of production factors.

If, however,  $\gamma=A$ , the negative effect on yield on capital of the of the capital-labor ratio (we have in mind the extensive growth of this factor) is compensated by a proportional growth of the aggregate effectiveness of production factors, while yield on capital remains unchanged.

And only when  $\gamma>A$  with the capital-expending form of influence of scientific-technical progress does yield on capital grow.

Thus growth of yield on capital can take place both in intensive and in purely extensive development, but a decrease—even with the existence of the influence of intensive growth factors. And since the usual change in return on capital occurs under the influence of intensive and extensive factors, special interest is presented by a quantitative evaluation of the influence of each type of factor on change of this indicator.

We express the indicator of yield on capital with the help of a modification of the productive function of Cobb-Douglas proposed by A.I. Anchishkin (1); in the latter a formal separation is made of the extensive and intensive types of development. Then

$$\phi_{o_t} = K \phi_{B_t}^{M-1} {}_{B_t}^{(M-1)(v-1)} c_t^{v-1}$$
 (4)

where  $\Phi_B$  is the capital-labor ratio in year t.  $\mu-1^t$  is elasticity of yield on capital for the capital-labor ratio; v-l characterizes the rise in the total effectiveness of production factors under the influence of scientific-technical progress.

Going from (4) to the relation of growth values, we obtain

where  $(\mu-1)f_{B_t}$  is a part of the growth of yield on capital responsible for the extensive growth of the capital-labor ratio (that is, with no change in qualitative characteristics of capital and labor);  $(\mu-1)(v-1)f_{B_t}$  is a part of the growth of yield on capital with growth of quality of labor but with no change in the quality and degree of utilization of fixed production capital;

 $(v-1)c_t$  is a part of the growth of yield on capital due to a change in the quality of fixed capital.

Moreover, inasmuch as  $\mu$ -1<0, with growth of the capital-labor ratio in the course of the period under examination, the first term of the right part of equation (5) will always be negative. The second term could be negative or equal to zero in the case where growth of quality of labor is in accord with the extensive growth of the capital-labor ratio and compensate for its negative effect on yield on capital (where v=1). Consequently, in these cases growth of yield on capital can occur if the increase in the effectiveness of used fixed production capital is sufficient not only to compensate for the negative effective of growth of the capital-labor ratio but also to ensure its growth. In the opposite case, even with a significant influence of intensive factors on economic growth, a drop in yield on capital may occur.

In the industry of Armenian SSR during the period studied by us (1965-1978), a certain drop was observed in the yield on capital of fixed production capital calculated both according to gross and according to net production (with an average yearly rate of reduction of 0.83 and 0.5 percent, respectively). At the same time, the evaluation and analysis of the parameters of the production functions carried out for the same period point to the presence of an influence of intensive factors on economic growth. During the course of the period under examination, the development of the republic's industry was of a capital expending character -- there took place replacement of live labor by embodied labor, and quite intensively at that. The average yearly rate of growth of the capital-labor ratio was 5.03 percent, which is positive from the social and economic point of view since it results in higher labor productivity, although it has a negative effect on the indicator of yield on capital. And since the change in yield on capital took place under the influence of both extensive and intensive factors, separate evaluation was required of the extent of influence of each type of factor on this indicator.

With this aim and on the basis of a statistical series of data for the period under investigation, we calculated the parameters of regression equation (4).

The results of the calculations, which were performed with the method of least squares on the YeS-1022 electronic computer both for gross and for net production of the industry of Armenian SSR, are presented in Table 1. The values of such statistical characteristics as the coefficient of multiple correlation (R) and the coefficient of Darbin-Watson (DW) attest to the fact that both problems of regression analysis—the problem of specification and the problem of evaluation of the parameters—were solved satisfactorily.

The evaluation of the degree of influence of extensive and intensive factors on change in yield on capital was performed with the aid of equation (5) (Table 2).

Analysis of the results shows:

the influence of extensive growth of the capital-labor ratio was quite significant;

growth of quality of labor--of the skill level of workers--was inadequate, as a consequence of which the contribution of the second term of the right part of equation (5) in the growth of yield on capital is negative;

despite the fact that the quality of fixed production capital grew significantly, the change in their effectiveness turned out to be insufficient even for compensation of the negative influence on yield on capital of the extensive growth of the capital-labor ratio.

Table 1

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Parameters	For gross production	For net production		
μ	0.53659	0.77539		
v	1.23675	1.14094		
R	0.99875	0.99937		
DW	1.10237	1.0308		

Table 2. Yield on Capital of Fixed Production Capital in Industry of Armenian SSR During 1965-1978

		Part of average yearly growth rate obtained as result of					
	average yearly growth rate	extensive growth of capital- labor ratio	intensive growth of capital- labor ratio	changes in quality of fixed pro- duction capital	extensive factors	intensive	
	-0.83	-2.42	-0.56	2.15	-2.42	1.59	
for gross		in % of aver	age growth ra	ite			
production	-100	-291.6	-67 <b>.</b> 5	259.1	-291.6	191.6	
	0.5	-1.16	-0.16	0.82	-1.16	0.76	
for net		in % of aver	age yearly gr	owth rate			
production	-100	-232	-32	164	-232	132	

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7697

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#### REGIONAL DEVELOPMENT

ALTAY CONFERENCE ON INTENSIFICATION OF PRODUCTION, IMPROVED ADMINISTRATION

Moscow EKONOMICHESKAYA GAZETA in Russian No 24, Jun 82 p 15

[Article by correspondent N. Manuilov, Barnaul: "The Chief Course--Intensification of Production; Comments from Kray Scientific-Practical Conference in Barnaul"]

[Text] An integrated approach to the problems of intensification of Altay's economy—such was the essential content of the reports and speeches at the conference in Barnaul. It was organized by the Altayskiy CPSU Kraykom, the editorial office of EKONOMICHESKAYA GAZETA, the Institute of Economics and Organization of Industrial Production of the Siberian Department of the USSR Academy of Sciences, the kray council and sectorial boards of NTO [scientific-technical societies (?)] and the Altayskiy Center of Scientific-Technical Information and Propaganda. There took part in the conference party, soviet and trade-union personnel, operational heads and scientists—more than a thousand people in all.

The solution of the task set by the 26th CPSU Congress—to complete transition of the economy to a chiefly intensive fourse of development, First Secretary of the CPSU Kraykom N.F. Aksenov pointed out and, under the concrete conditions of Altay, an integrated approach to improvement of administration in the region, stimulation of the initiative of labor collectives and the carrying out of diverse economic experiments.

Such work experience exists in the kray, and the experience is not small. Accomplishment of the complex program of social-economic development of Altay for 1971-1980 on the whole yielded positive results.

High rates of development are characteristic of the kray. During the seventies, the volume of industrial production here grew 1.7-fold and of capital construction—1.6-fold; the average yearly growth rate in agriculture exceeded 2 percent. The rate of development set for Altayskiy Kray, just as for the eastern regions of the country as a whole, in the 11th Five-Year Plan was higher than the average for the national economy. In the first year of the new five-year plan, labor productivity of the kray's industry increased 3.8 percent. Because of this a 97.5 percent growth of production output was obtained. But the attained growth rate of labor productivity has been so far below that planned as the average for the five-year plan. Accelerated development of the kray's economy is possible only with increased intensification. A report presented

at the conference by V.T. Mishchenko, second secretary of the party kraykom, dealt with an analysis of these problems.

Altay is an important part of the unified national economic complex of the country. The new regional program of development of the kray's productive forces developed for the 11th Five-Year Plan jointly with scientists of the Siberian Department of the USSR Academy of Sciences, VUZ's and sectorial institutes has become one of the constituent parts of the broader Sibir' Long-Term Program.

Conference participants also heard a number of reports elucidating many aspects of the theory and practice of intensification of the economy of the country and Siberia. Those present heard Academicians A.G. Aganbegyan, T.I. Zaslavskaya, chief of an administration of the USSR State Committee for Labor and Social Problems, Doctor of Economic Sciences Ye.G. Antosenkov, Professor of the Academy of Social Sciences attached to the CPSU Central Committee L.I. Abalkin, corresponding member of the All-Union Academy of Agricultural Sciences V.R. Boyev, V.A. Belyanov, the first deputy chief editor of EKONOMICHESKAYA GAZETA, and heads of associations, enterprises and economic organizations of the kray.

# Altay's Agroindustrial Complex

Altay today is a large agroindustrial complex. The kray's workers have an important role in the solution of the complex tasks of the food program approved by the May Plenum of the CPSU Central Committee. During the 11th Five-Year Plan, average annual growth of agricultural gross production here compared to the 10th Five-Year Plan should be more than 18 percent. To achieve this, V.I. Ovchinnikov, the party kraykom secretary, pointed out, it is planned to boost labor productivity over the five-year period by 23 percent at kolkhozes and sovkhozes.

Altay has good conditions for increasing the integration of agriculture with industry. Here the processes of specialization and concentration of production and of interfarm cooperation are developing actively, and progressive processes in plant growing and animal husbandry are being introduced.

The achievements of the collective of Sannikovskiy Sovkhoz can serve as an example. They were described by its director, V.A. Sokolenko. During the years of the 10th Five-Year Plan, the farm was transformed into an intensive enterprise of a dairy and vegetable type with an industrial technology of production. Intrafarm specialization played a big role here. At the sovkhoz, specialized departments in fodder production and animal husbandry were created, progressive forms of organization and labor incentives were introduced. What are the results of all this work? From 1965 through 1980, milk yield per foraging cow, for example, increased from 2,867 kilograms to 3,175 kilograms and vegetable production from 75.6 to 283 quintals per hectare; gross production per 100 hectares of agricultural fields rose from 114 to 378 rubles during these years.

The first successful steps are being taken by Altayplodoovoshchkhoz Agroindustrial Association. This has had a marked effect on reducing losses of vegetables and on boosting the marketability of their production. Solely because

of this, 6,600 additional tons of vegetable produce were sold to the state. Experience is being accumulated in the kray of cooperative organization of technical resources of kolkhozes, sovkhozes and enterprises of the kray's Selkhoztekhnika: two years ago, the Mikhaylovskoye, Topchikhinskoye and Tyumentsevskoye interfarm associations for mechanization of agriculture were created.

At the conference, there was emphasized the need of widely developing the labor cooperation of collectives of kolkhozes and sovkhozes with enterprises of the dairy, sugar and other sectors of the processing industry and of more actively introducing all the valuable and efficient methods of work discovered by the best labor collectives of the kray and of the whole country.

The Territorial Aspect of Administration

The territorial aspect is first of all an effective union of the efforts of the workers of enterprises of different sectors for the attainment of the best end result. The problem in itself is not new, but it is complex and very topical.

The kray has good experience in such work, for example in Priobskiy Rayon of the city of Biysk. B.P. Orlov, the first secretary of the raykom, relates:

"Coordination of questions of territorial administration in our city is carried out by the social council attached to the party raykom. It includes chief engineers and specialists of enterprises and associations and scientists of the affiliate of the Altay Polytechnic Institute. The council is concentrating its work on acceleration of scientific-technical progress. In the past three years, 44 automatic and mechanized flow lines have been installed and put in operation, about 2,000 people have been released and sent to other sectors and the relative share of products of the highest category of quality has markedly increased. And our council has made a major contribution to this.

The accumulated experience has made it possible to begin on the creation of the kray territorial system—the Altay Automatic Control System. One of its chief tasks is ensuring of rational proportions in the development of the region's economy.

At the same time, there are questions which seriously bother Altay's heads and specialists.

"We have worked out methods and a structure for the formation of a complex regional plan," I.F. Chernyshov, deputy chairman of the krayispolkom, said. There is a plan for the 11th Five-Year Plan. It shows and designates the chief directions of development of the kray's agroindustrial complex. But this complex plan has essentially turned out to be so far only the sum of sectorial plans."

The role of complex regional planning is growing significantly with the creation of agroindustrial associations. The proportional, interdependent development of interprises and organizations of agroindustrial associations is one of the decisive conditions of their effectiveness.

Much work has to be done by us in order to introduce the principles of administering agroindustrial associations determined by the May Plenum of the CPSU Central Committee.

On the Basis of Progressive Norms

General Director Yu.V. Boytsov spoke of the development and realization of the five-year plans of mechanization and automation of production by the collective of Sibenergomash Association. Here are the figures he quoted: By the end of the 11th Five-Year Plan, the level of mechanization of operations should reach 65 percent in casting production and 74 percent in welding production at Barnaul Boiler Plant—the association's head enterprise. A number of shops at the plant will be completely provided with mechanized equipment.

Many reserves for a significant growth of labor productivity are to be found in improved norm setting. Today, targets set on the basis of intersectorial and sectorial norms are being more widely put into practice; the practice exists of setting labor norms for time-rate workers. At the same time, an experimental statistical norm is still set for about each fifth pieceworker. The fact that one-third of workers overfulfill their norms by more than 30 percent also attests to the inadequate validity and progressiveness of many norms.

Speakers devoted a great deal of attention to an analysis of the use and ways of renewing equipment existing at enterprises of the kray and to questions of modernization and reequipment of production and of economy and thrift.

The experience of Barnaul's Khimvolokno Production Association, concerning which its general director V.I. Markin spoke, shows the great effectiveness of the work of modernization and reequipment of production. During the 10th Five-Year Plan, 15.3 million rubles were spent here on modernization of kapron production. This is a large sum, but its yield has been good: yearly production of synthetic threads increased by 5,600 tons; profit grew by 7 million rubles, and the assortment of products changed for the better in conformity with the requirements of users.

No less an important development has been the rational utilization of existing production fixed capital. Here are to be found problems that are not simple. Our newspaper (No 8 of this year) described in detail the analysis of the level of return on investment in Altay's industry and the ways designated here of boosting and improving the use of producer goods, raw and other materials and labor resources.

One of the most important directions in this work is all-out development of brigade forms of labor organization and stimulation.

All Brigades--To Cost Accounting

At the Altay Plant of Tractor Electrical Equipment, Director P.S. Prikhod'ko reported, 90 percent of production workers today work in brigades with pay for end results. Moreover, it is in the brigades that work is proceeding most actively on working at two jobs and expanding zones of service of equipment.

What does this do? In the three years of formation of brigades, labor productivity in them grew on the average 7.4 percent yearly. This is higher than planned. In addition, labor discipline was markedly strengthened and cadre turnover was reduced by almost one-fourth.

There are many such examples. About 13,000 cost-accounting brigades work in the kray's industry, and more than half of all production workers work in them. In construction, the number of brigades working according to N. Zlobin's method is growing. Effectiveness has been proved of the new collective forms of labor organization and pay in agriculture. At Druzhba and Sorokinskiy sov-khozes and at a number of other farms, collectives working according to the principle of the brigade contract have a labor productivity that is 25-30 percent higher than in the case of those not using this method.

Nonetheless progressive forms of labor organization are not paid sufficient attention everywhere. Conference participants cited examples where a lot of publicity is noised about concerning other brigades, but their labor productivity leaves much to be desired.

The Altay conference was still another manifestation of that truly nationwide search for reserves of boosting the effectiveness of the Soviet economy, which on the initiative of the party has been launched throughout our entire land. This search is creative, encompassing all spheres of the national economy. It is a token of the successful implementation of new plans of further economic and social progress.

7697 CSO: 1820/189

### REGIONAL DEVELOPMENT

UKRAINIAN GOSPLAN CHAIRMAN ON ROLE OF COMPLEX PROGRAMS IN RAISING EFFICIENCY
Moscow PRAVDA in Russian 7 Jul 82 p 2

[Article by V. Masol, deputy chairman of Ukrainian SSR Council of Ministers, chairman of Gosplan UkSSR, Kiev: 'Key Factors of Acceleration']

# Through Complex Programs

The conditions in which the country's national economy will develop during the '80s were pointed out at the 26th CPSU Congress. They make more imperative accelerated transfer of the socialist economy to the rails of intensification and further expansion of the scale of use of the achievements of scientific-technical progress. A major role in the solution of these tasks is being given to complex programs. In the Ukraine, the realization of a number of such programs has made it possible to strengthen the tie of science to production and during the 10th Five-Year Plan to create more than 4,000 models of new types of machines, equipment and instruments. Due to reduced production cost, more than 3.0 billion rubles have been saved.

Take Zhdanov's Azovstal' Metallurgical Plant. The fulfillment of the program's targets by its collective made it possible during the past five-year plan to smelt metal for the first time in the Ukraine with the use of treatment with inert gases and synthetic slag out of the furnace. As a result of the improvement in the quality of the metal, the yearly saving exceeded 26 million rubles.

The high level of effectiveness of scientific-technical programs led to their wide-scale use throughout the entire republic. These programs have been included in the 11th Five-Year Plan. Control over their fulfillment has become more efficient.

For the current five-year plan, six republic special-goal programs were developed for the first time: Energokompleks, Metall, Materialoyemkost', Agrokompleks, Sakhar and Trud. End goals, time periods and stages in the fulfillment of work and their material-technical and financial provision were designated. The republic is fulfilling targets for more than 160 all-union programs. Thirty-five republic programs for the solution of most important problems

are also being carried out. Thirty-seven republic programs are aimed at the curtailment of manual labor. These programs play the role of key factors in boosting efficiency of production.

Let us examine some of them, for example, Energokompleks. Inasmuch as a leading place belongs to the coal industry in Ukraine's fuel and power sector, special attention is paid in the program to scientific-technical solutions relating to mechanization of cleaning and preparatory work, to making available to the sector high-efficiency equipment for working of thin strata under difficult geological and mining conditions and to increasing the labor safety of miners. Studies have been designated for production of coal by means of nontraditional and non-pit methods and designing of equipment for extraction of minerals without people being always present in the working face.

All this promises higher efficiency for the sector by the end of the five-year plan; the volume of coal extraction from comprehensively mechanized faces will be increased by 30 million tons. Labor intensiveness of operations at thin and steeply descending strata as well as preparatory workings in these faces will be reduced 1.3-1.5-fold.

The solution of problems of introducing new equipment frequently runs into a number of difficulties.

It is not the first year that the republic's miners are experiencing a shortage of first-rate equipment for digging coal from poorly provided strata in mines with difficult geological conditions. Designers have proposed for these strata the KD-80 mechanized complex, which has successfully passed tests at Donbas mines, but has not gone beyond experimental models. Another example. For many years miners have been awaiting a combine for tunneling through hard rock. Last year such a machine did well at Mine imeni XXV S'yezd KPSS of Makeyevugol' Association. But the time for its series manufacture has as yet not been set. The USSR Ministry of Coal Industry and machine-building ministries must now more effectively organize production of new equipment for miners.

In addition, it is necessary to better organize work on accomplishment of the targets of the program for republic ministries and departments, first of all the UkSSR Ministry of Coal Industry. At coal mines, the new high-efficiency equipment is not always used effectively. The reasons are its inadequate reliability, nonconformance of the machines' parameters to difficult geologial and mining conditions and defects in organization of the work. The Ukraine's powerful scientific potential is still being feebly used in the solution of problems of dealing with refuse and discharge of gases as well as the high temperatures characteristic of many Donbas mines.

An essential condition of further intensification of the economy is the use of energy-saving technologies. The program provides for the solution of a number of many important problems pertaining to the development of power engineering and economy of fuel and power resources. It is planned to increase the capacities of atomic electric power stations; this should provide for practically the entire increase in the production of electric power in the republic and will save about 62 million tons of organic fuel. That is enough for the

operation of all thermal electric power stations in the Ukraine for a period of a year. Transportation costs will also be reduced by almost 100 million rubles, and a million railroad cars will be released for other needs.

The targets of this program would have been fulfilled much more quickly if last year the construction organizations of the USSR Ministry of Power and Electrification had not held back the startup of the third power unit at Chernobyl'skaya AES and had not violated the time periods for the startup of a number of other power capacities. One of the chief causes is oversights in the development of the construction base of these organizations on the territory of the republic.

The Ukraine is one of the country's largest metallurgical bases; here much is being done to increase output of metal and to raise the quality of metal products. In recent years, however, the development of the sector has not met the growing requirements in regard to it—at times production quality is low and the expenditure of metal in the sphere of production and consumption is unjustifiably high.

The republic Metall Program is aimed at a radical improvement in the quality and increased output of effective types of metal products. In particular, it provides for an increase in the years of the current five-year plan in the production of rolled products from the more durable low-alloy brands of steel amounting to 1.7-fold. The employment of each ton of such products makes it possible to save roughly one-third of the metal and in addition it significantly expands the possibilities of machine builders and construction workers. The program plans to increase more than 2.5-fold the output of heat-resistant rolled products. This will save on the average almost 25 percent of metal.

Much attention is also being paid to the manufacture of products with protective coatings. In particular, production of pipe and other items with anticorrosion "armoring" lasting two to three times as long as the ordinary kinds will grow sevenfold. These and other measures will ensure an economy of more than two million tons of metal.

An analysis of the progress of realization of this program showed that the targets established for the past year were essentially fulfilled. But there were also disclosed breakdowns in the provision of ferroalloys and equipment as well as holdups in the construction of a number of installations. The Ukrainian Ministry of Ferrous Metallurgy failed to fulfill the targets for mass employment of a number of progressive production processes, including such as hot sizing of large round shapes of rolled metal, thermal hardening of large-diameter reinforced steel and others. This results from the fact that they are slow at the ministry in reorganizing work relating to the introduction of new technology.

Several other problems await solution. I shall name several high-priority ones. The cooperation of ordering parties and consumers has to be improved: metallurgical workers with great difficulty master new shapes of rolled metal; it would seem that a rule should be made that Gossnab USSR serve as the ordering party of these products and have at its disposal a well-organized

information service on stock of such rolled metal at their depots. Things will be easier for designers of machines and mechanisms: they will use these shapes with more confidence.

In conformity with the Food Program of the USSR adopted at the May (1982) Plenum of the CPSU Central Committee, a food program has also been made up in the Ukrainian SSR for the period to 1990; it provides difficult targets for the production of agricultural products and further expansion of the agroindustrial complex. A special Agrokompleks Program has been developed for the present five-year plan in the republic as a component part of it; it provides for intensification of agricultural production, reduction of losses and improvement of product quality. The measures designated by the program are characterized by a high economic effect—about one and a half billion rubles per year. It is envisaged that the average yearly grain production will be 18 percent higher than during the past five—year plan and that of cattle and poultry in live weight—almost 11 percent higher. These targets require all reserves being brought into production.

And there are many of them. Let us take, for example, Krymskaya Oblast. Here, despite the unfavorable conditions of the past year, by growing corn for grain on 33,000 hectares according to a progressive technology, about 16 quintals more were gathered from each hectare than with the ordinary method. Consequently, it is essential more quickly and on a broader scale to introduce new technologies into agricultural production.

But this is done ineffectively in a number of cases. Khar'kov Tractor Plant is slow in increasing capacities for the expansion of production of the power-rich T-150 tractor, and the Ministry of Tractor and Agricultural Machine Building is not developing machine levelers for it. In the last 10 years it has not provided 15,000 each of them for agriculture and continues to put out the obsolete T-74 tractors. As a result, the republic's farms have been undersupplied with more than one million horsepower.

At the same time reserves are being inadequately used locally: not all of the republic's farms with improved land are diligently using it. In particular, a number of kolkhozes and sovkhozes are not fully applying mineral fertilizers to the irrigated land and are violating agricultural practices.

In the republic, a review was made of the introduction into production of results of research in the course of which additional reserves are sought for the speeding up of scientific-technical progress. This will help in successfully dealing with targets and with indicators found in the 11th Five-Year Plan for continued economic and social development and raising of the efficiency of public production.

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CSO: 1820/189

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